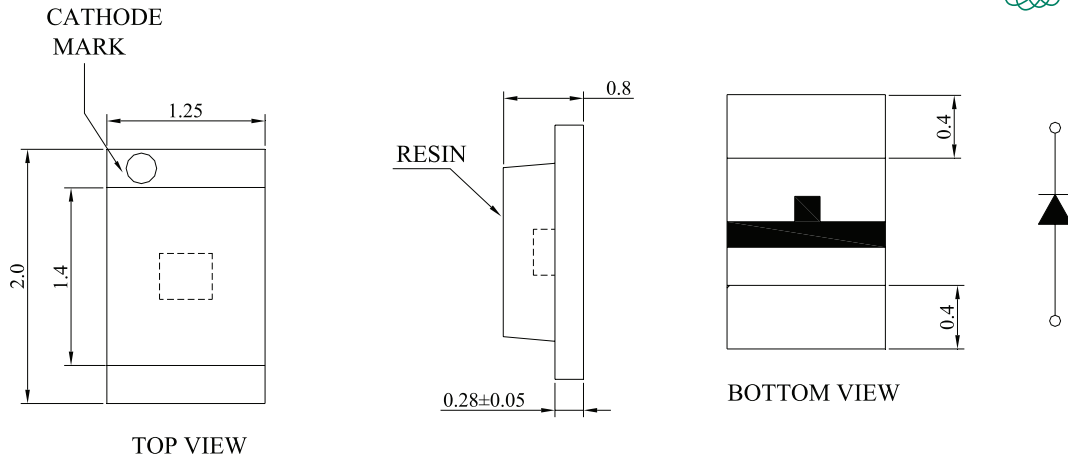


# SMD Chip LED



## Package Dimensions:



All dimensions are in mm  
Tolerance:  $\pm 0.1$ mm

## Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Rating	Unit
Power Dissipation	P <sub>D</sub>	72	°C
Reverse Voltage	V <sub>R</sub>	4	V
D.C. Forward Current	I <sub>f</sub>	30	mA
Pulsed Forward Current (1 / 10 Duty Cycle, 0.1ms Pulse Width)	I <sub>f</sub> (Peak)	80	mA
Operating Temperature Range	T <sub>opr.</sub>	-40 to +80	°C
Storage Temperature Range	T <sub>stg.</sub>	-40 to +85	°C
Soldering Temperature	T <sub>sld.</sub>	Reflow Soldering: 260°C for 10sec.	

## Electrical & Optical Characteristics: Hyper Red

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Luminous Intensity	I <sub>v</sub>	I <sub>f</sub> = 20mA	-	20	-	mcd
Forward Voltage	V <sub>f</sub>	I <sub>f</sub> = 20mA	1.6	-	2.2	V
Peak Wavelength	λ <sub>p</sub>	I <sub>f</sub> = 20mA	-	660	-	nm
Dominant Wavelength	λ <sub>d</sub>	I <sub>f</sub> = 20mA	-	643	-	nm
Reverse Current	I <sub>r</sub>	V <sub>r</sub> = 5V	-	-	100	μA
Viewing Angle	2θ ½	I <sub>f</sub> = 20mA	-	140	-	deg
Spectrum Line Halfwidth	Δλ	I <sub>f</sub> = 20mA	-	20	-	nm

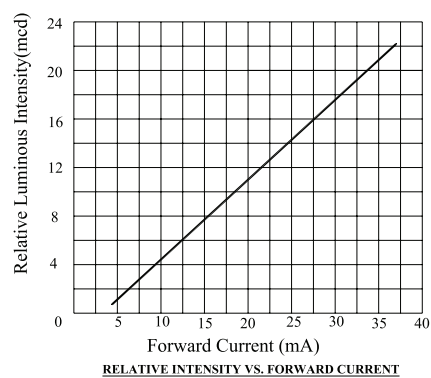
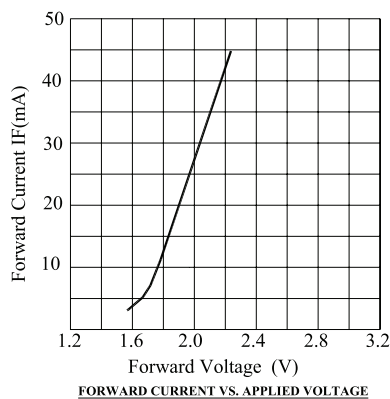
Note: 1. The data is tested by an IS tester  
2. Customer's special requirements are also welcome.

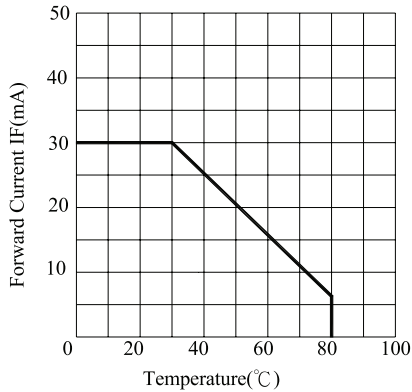
## Product Specification

	Specification	Material	Quantity
Iv	N: 11.0 – 16.5 mcd P: 16.5 – 24.4 mcd Q: 24.4 – 36.7 mcd @ 20mA	-	-
λd	636 – 650 nm @ 20mA	-	-
Vf	F: 1.6 – 1.8 V G: 1.8 – 2.0 V H: 2.0 – 2.2 V @ 20mA	-	-
Ir	< 100μA @ Vr=5V	-	-
Resin	White diffused	Epoxy resin	-
Carrier tape	-	Conductive black tape	4,000pcs per reel
Reel	-	White	-
Label	LT standard	Paper	-
Packing Bag	250mm × 220mm	Aluminium laminated bag	One reel one bag
Carton	LT standard	Paper	Non-specified
Others:		-	

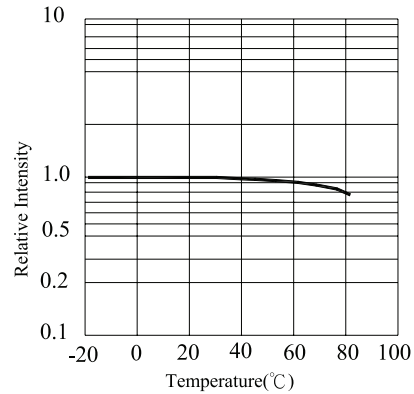
## Typical Electrical & Optical Characteristics Curves:

(25°C Ambient temperature unless otherwise noted)

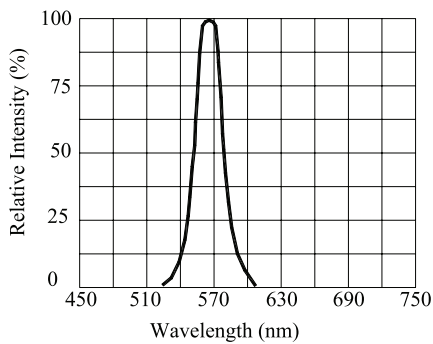




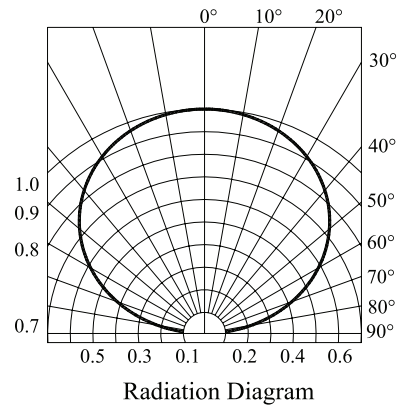
**FORWARD CURRENT VS. AMBIENT TEMPERATURE**



**RELATIVE INTENSITY VS. AMBIENT TEMPERATURE**



**RELATIVE INTENSITY VS. WAVELENGTH**



## Recommended Storage Environment:

- Temperature: 5°C to 30°C (41°F to 86°F)
- Humidity: 60% RH Max.
- Use within 7 days after opening of sealed vapour/ESD barrier bags

If moisture absorbent material (silica gel) has faded away or LEDs have exceeded the storage time, baking treatment should be performed using the following conditions:

- Baking Treatment : 60 ± 5°C for 24 hours
- Fold the opened bag firmly and keep in dry environment

## Reflow Soldering

Recommended use of upper and lower heater type reflow furnace.

- 260°C max for up to 10 seconds, one time only
- Pre-heat is 150°C max for up to 2 minutes max
- In case of screen-printing, keep metal mask thickness between 0.2mm and 0.3mm

## Cleaning

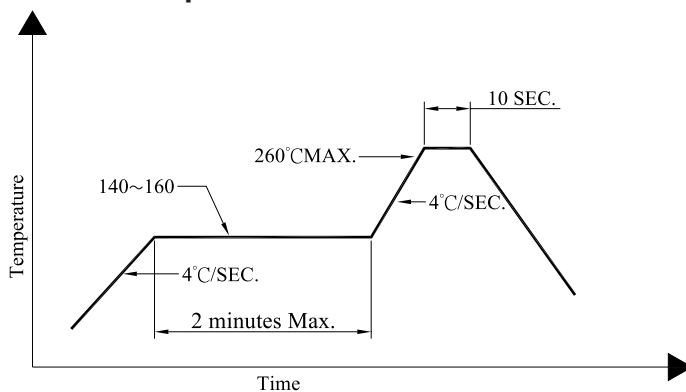
Surface condition of this device may change when organic solvents such as trichloroethylene or acetone were applied.

- Avoid using organic solvent
- Recommend ultrasonic method 300W max.

## Packaging

- EIA-481A standard package
- In 8mm tape on 4,000pcs diameter reels sealed in vapour/ESD barrier bags

## Reflow Temp / Time:



## Part Number Table

LED Chip		Lens Colour	Part Number
Material	Emitting Colour		
AlGaAs / AlGaAs	High Red	White diffused	703-0108

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